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ABSTRACT

The economic impact of Berry College on Rome County, Georgia, was assessed using a differential value-added technique to measure the amount of induced spending. Direct spending sources associated with the college are direct purchase of goods and services and spending by faculty, staff, students, and visitors. Since every dollar initially spent in the area turns over several times in the community, Berry College's total economic influence is a multiple of these direct dollar flows. A method of computing the multiplier value, unique to the college and area, was established. It was determined that every dollar the college draws into the area induces an additional 66 cents income for area residents. The college directly provides 333 full-time positions; using the estimated multiplier, the college provides the community with a total of 701 full-time jobs. While college-related spending for 1985 amounted to about $14 million, the multiplier estimates the total income impact at about $24 million. Included are staff, student, and visitor questionnaires, along with a summary of contributions of 15 economic impact studies of colleges published from 1964 to 1984. (SW)

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# JOBS AND INCOME
# FOR ROME AND FLOYD COUNTY:
# THE BERRY COLLEGE IMPACT

by

**Charles D. Salley**

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## HIGHLIGHTS

Berry College is recognized in its community as an educational and cultural asset. This study documents another dimension of Berry College that is less well known: its impact on Rome area jobs and income.

Initial sources of this positive economic impact are the College's local purchases, the payroll spending of its faculty and staff, spending by students drawn to the area by Berry College and spending by visitors to college events, Oak Hill, Possum Trot and the Martha Berry Museum. Applying techniques developed in similar inquiries at other post-secondary educational institutions, the present study assesses the level of these important direct sources of Rome area income.

Moreover, since every dollar initially spent here turns over several more times in the community, Berry College's total economic influence actually is a multiple of these direct dollar flows. Using a sophisticated model which avoids both the oversimplification of aggregate location quotient models, as well as the massive data requirements of input-output models, the study arrives at a Rome-area multiplier of 1.66.

The study's findings include:

* The College's direct local purchases total $5,423,072 for fiscal 1985.
* Faculty and staff members each spend locally an average of $15,855.
* The average student living on campus spends $1,979 in the Rome area every school year and students living in town spend $4,102.
* Visitors drawn to the College spend a total of $641,000 every year.
* Initial direct spending from these sources adds up to $14,335,875. The figure is conservative since it omits spending by part-time faculty and 264 graduate students.
* Using the 1.66 multiplier value, the College's total impact on Rome trade area income reaches $23,797,552.
* Berry College directly provides 333 full-time jobs in Rome and College-related spending generates an additional 89 full-time positions in the community. This makes Berry the trade area's sixth largest private employer.
* Using the 1.66 multiplier estimate, the College's total employment impact reaches 701 full-time jobs.
* Impressive as these figures are, the College's greatest economic impact is the increased earning potential of its graduates in the Rome area and the attraction that Berry College has for new industry.

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# I. INTRODUCTION

A college plays many roles in the local community in addition to its intended purpose. As it pursues the primary aims of educating its students and extending the boundaries of existing knowledge, the college also tends to broaden the local social and political environment. Graduates and faculty alike find their way into school, library, hospital, church and charity boards and activities.

In the midst of these contributions, the college's economic impact is often seen as incidental. Of course, the college increases the future earning potential of its students, but what is overlooked is that by creating jobs and income, the college simultaneously increases the present earnings of the community.

Interest in estimating this immediate economic impact has surged in the past five to ten years. This is because colleges and universities, as well as other nonprofit institutions, have come to realize a need for broad local acceptance of their activities. Local communities that understand and participate in an institution's activities generally provide substantial and ongoing support. A study of the institution's economic impact fosters such understanding.

Economic impact studies consequently have become a vehicle to promote positive attributes of nonprofit institutions for local areas. In the case of colleges and universities, the emphasis upon immediate economic benefits results somewhat from the difficulty in translating significant long-term benefits, such as improved human resources, into concrete measures. In contrast,

the college's immediate employment and income contribution can be rather precisely identified.

The present study measures the substantial economic dimension of Berry College's contribution to the Rome and Floyd County trade area. The study is conservatively designed. Even though it does not consider negative influences on local income such as tax-exemption, the difficult to measure positive benefits of human capital improvement likely cause the current dollar estimate of positive economic benefit to be understated.

## II. PURPOSE

The purpose of this study is to identify successful estimating techniques developed by previous studies of local spending impact and, by using these techniques, to give the Rome community a clear picture of the considerable contribution Berry College makes to Rome/Floyd County trade area jobs and income.

The immediate economic impact flows from four direct spending sources associated with Berry College. The first of these is the direct purchase of goods and services needed for day to day operations at the College and by its auxiliary activities. The second is the spending patterns of the College's faculty and administrative staff. The third and fourth primary channels of economic impact are the spending patterns of the College's students and visitors.

While all enterprises affect the local economy by direct purchases and payroll expenditures, these last channels -- student and visitor spending -- are unique to post-secondary educational institutions.

Even these four primary channels of direct spending, although substantial, do not give a complete picture. Because of the interdependence of a high-consumption mass-production economy, every dollar of final good purchase sets in motion a flow of income to the chain of activity providing this final dollar purchase.

Berry College's total spending impact on the Rome trade area is thus some multiple of its initial, direct channels of spending. Consequently, the study also establishes a method of computing the multiplier value, unique to the College and the area, so that the College's total spending impact may be estimated on a timely basis at future dates.

## III. REVIEW OF THE LITERATURE

Economic impact studies of colleges and universities first appeared in the mid 1960's. Table 1 summarizes the contributions of fifteen representative studies published from 1964 to 1984.

From the initial study forward, all have regarded the College as an export sector of the local economy. The College is an export or base sector because most of the institution's income and most of its students' income originate outside the community. To the extent that this money from nonlocal sources is spent in Rome, for instance, the College provides local jobs and income very much

TABLE 1

Summary Characteristics of Previous Impact Studies
(See Bibliography)

| Institution and Year | Major Contribution | Major Shortcoming | Use of a Multiplier |
|---|---|---|---|
| Univ. of Bridgeport (1964) | Recognizes the "export" nature of college services | Considers only direct expenditures of university | No |
| Northern Michigan (1965) | Disaggregates university spending by types of goods | Considers only direct expenditures of university | No |
| Husson College (1967) | First use of multiplier to estimate induced spending | Derivation of multiplier not specific | Yes (2.0) |
| Univ. of Colorado (1968) | Considers Input-Output Analysis but rejects as too costly | Ignores induced effects of student spending | Yes (1.37) |
| Univ. of Connecticut (1969) | Recognizes cyclical stability of university employment | No report of survey results | No |
| Univ. of Florida (1970) | Justifies all univ. employment as basic. Develops method to determine what portion of student spending is basic (equivalent to university employment) | Basic employee equivalents of student spending are biased upward | Yes (1.4) |
| Wisconsin State Univ. (1970) | Estimates future impact based on enrollment projections | Derivation of multiplier not specific | Yes (2.0-2.3) |
| Univ. of Alabama (1971) | Illustrates upward bias of aggregate employment multipliers | Unusually high multiplier resulting from aggregate approach | Yes (4.35) |
| Idaho State Univ. (1971) | First attempt to disaggregate student spending | Sample design led to considerable bias | No |

TABLE 1
(Continued)

| Institution and Year | Major Contribution | Major Shortcoming | Use of a Multiplier |
|---|---|---|---|
| Eastern Kentucky Univ. (1971) | First use of student spending diaries | Derivation of multiplier not specific | Yes (1.75) |
| Univ. of Pittsburgh (1972) | Comprehensive data collection | No independent estimate of multiplier | Yes (2.0) |
| Kent State Univ. (1973) | Specific calculation of university sector multiplier | Assumes university multiplier and service sector multiplier are same | Yes (1.09) |
| Georgia State Univ. (1976) | Specific calculation of alternative multiplier models | Does not consider negative tax impact or positive human capital | Yes (1.22-1.78) |
| Georgia Tech. (1978) | Full Input-Output Multiplier Analysis | Unusually high multiplier value | Yes (2.94) |
| Caldwell Community College (1984) | Assessment of part-time nonresident students | | Yes (1.52) |

like a local mill exporting highly desired manufactured goods to other areas.

Similarly, the College sells educational and research services to outsiders, even though consumption takes place locally. In this way the College "exports" educational services in the same sense that a Florida resort exports services to winter visitors.

All previous studies estimate the local demand for goods and services that results directly from spending by the college and its faculty and students. The Husson College study (Vizard, 1967), though, was the first to use economic analysis to measure the secondary spending induced by the institution's initial direct spending. This study introduced to college impact studies two concepts from regional economics -- the theory of a community's economic base and the local multiplier.

The underlying idea of economic base theory is regional specialization. The division of labor, and a corresponding degree of specialization, is a prominent characteristic of advanced economies. Great increases in productivity result when participants in an economy concentrate in specialized activities where they have natural or trained abilities, or a local endowment of natural resources.

A community's economic base consists of these specialized activities that produce for a demand that exceeds local consumption, that is, activities that involve sales to firms located elsewhere (North, 1955; Tiebout, 1962). Such activities produce an inflow of money income from nonlocal sources. Hence, the economic base is often called the "export" base. A portion of

the outside income then makes its way as wages and purchases into local trade and service activity.

The University of Florida study (Cook, 1970) focused on the initial difficulty with the export-base concept, which is the proper classification of basic and secondary service sectors. The study examined the restricting argument that college spending viewed as a base sector should be limited to its nonlocal funds, i.e., home town students "don't count." Cook successfully argues that if local expenditures for education would be spent elsewhere in the absence of the college, then the local institution keeps local money home. This is because local high school graduates do not have to live elsewhere to study for a college degree. The concept is called "import substitution" and it validates counting all local college spending as a base sector.*

The Idaho State University Study (Kelly & Peterson, 1971) raised the question of correct sample design for faculty and student spending surveys. This study surveyed class sections drawn randomly, whereas previous studies had drawn a random sample of individual students. Wilson and Raymond (1973) suggests that a proportional, stratified sample produces a less biased estimate of the population's spending. Appendix A-3 illustrates the method used to estimate local faculty/staff spending from stratified survey results. The same weighting procedure is used to estimate local spending patterns by students.

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* Even so, the present study does not count spending by 264 graduate students who live in the Rome area. It is unlikely that many of these would "import" the master's degree by moving temporarily to a distant university town.

The university impact studies which calculated their own multiplier value approached the problem in a conceptually identical manner (Billings, 1969). The simplest model is the aggregate location quotient multiplier. Here, the multiplier is easily calculated as the ratio of base sector spending (or employment) to total area spending (or employment). The model's drawback is the use of a single multiplier for all sectors of the local economy.

The assumption that all sectors have the same proportion of local spending can lead to great overstatement of the institution's economic impact, especially in rapidly growing areas where the base sectors are shifting. Using this method, some studies arrived at multiplier values as high as 4.35.

To overcome this drawback, the Kent State study (Wilson & Raymond, 1973) suggested computing a multiplier specifically for the university proportion of the community's economic base. The university multiplier is computed from the local value-added of various sectors in proportion to university spending in each of these sectors. Table 3 illustrates this technique from the model used to measure Berry College direct purchases in the Rome area.

A third type of model, a differential value-added multiplier (Bresler, 1974; Salley, 1978), is a refinement of the Kent State type model. As the name indicates, two different multipliers come into play -- an initial local spending ratio unique to the College's purchase pattern and a second ratio for subsequent rounds of spending typical of local consumers.

The limiting case of this type of disaggregation is the input-output model which uses separate spending ratios for every sector of the local economy. The Bresler type model represents a happy medium by recognizing that, while the initial spending impact of a college may differ substantially from the initial spending impact of, say, a textile mill, the induced respending by their employees and other local consumers is likely to be similar and, hence, more reliably aggregated.

This latter approach is used in the present study of Berry College's economic impact. The differential multiplier takes account of the College's unique spending pattern in Rome while avoiding the immense data requirements of a full input-output model. Table 4 shows the calculation of the Berry College multiplier value as a combination of the local value added by initial College purchases and the local value added by subsequent rounds of consumer spending generated in the Rome trade area.

## IV. CONDUCT OF THE STUDY

The estimation of a college's local economic impact proceeds in nine phases:

(1) Collection of college enrollment, payroll and purchasing data.

(2) Calculation of initial impact of college purchases.

(3) Survey and estimation of faculty and staff spending.

(4) Survey and estimation of student spending.

(5) Survey and estimation of visitor spending.

(6) Calculation of the local multiplier.

(7) Computation of the College's total impact on Rome area income.

(8) Calculation of employee equivalents of student and visitor spending.

(9) Computation of the College's total impact on Rome area employment.

The Berry College study follows this outline.

## V. RESEARCH FINDINGS

In the study of Berry College's impact on the Rome trade area, the Registrar's Office provided student population data and the Business Office provided the number of employees by category, gross payroll figures for the fiscal year, and the total student aid figure. (Table 2)

The first direct spending source to measure is direct local purchases by the College. The Business Office provided initial expenditure data for fiscal 1985. This budget purchasing data was examined to exclude nonlocal purchases and regrouped to correspond to the Standard Industrial Classification (SIC) used by the Department of Commerce. The regrouping was necessary because census payroll and sales data for local areas are published only for SIC code groups.

TABLE 2

BERRY COLLEGE DATA

1. **Student Population** (Fall Quarter 1985)

| | Resident | Off-Campus | Total |
|---|---|---|---|
| Freshmen | 295 | 32 | 327 |
| Sophomore | 307 | 32 | 339 |
| Junior | 179 | 47 | 226 |
| Senior | 160 | 91 | 251 |
| Graduate | 4 | 260 | 264 |
| | 945 | 462 | 1407 |

2. **Faculty/Staff Population*** (September 1985)

| | Full-Time | Part-time | Total |
|---|---|---|---|
| Faculty | 98 | 9 | 107 |
| Staff | 235 | 19 | 254 |
| | 333 | 28 | 361 |

3. **College's Local Expenditures** (Fiscal 1985) $5,423,072

4. **Gross College Payroll** (Fiscal 1985)

| | |
|---|---|
| Faculty/Staff | $6,448,375 |
| Student Work Program | 1,163,144 |
| | $7,611,519 |

5. Student Aid (Fiscal 1985) $1,752,717

* Student work program not included.

SOURCE: Registrar's Office and College Business Office.

The initial local impact of College purchases was estimated in two steps. First, the Floyd County payroll/sales ratios used as proxies for local value-added were calculated from Department of Commerce census data. Next, each category of purchases was multiplied by the respective Floyd County payroll/sales ratio to obtain the amount of purchase retained as income in the County. These payroll amounts were totaled to find the initial impact of College purchases on local income. (Table 3) Direct purchases totaling $5,423,072 resulted in local payroll amounting to $1,682,106 in fiscal 1985.

The next direct spending sources to measure are spending by the College's faculty and staff, students and visitors. To estimate the spending patterns of faculty/staff and students, the Research Office conducted questionnaire surveys. A 100 percent faculty/staff survey produced 147 complete responses. The weighted annual average of reported local spending was $15,855 for each employee. With a payroll of 352, the total annual direct spending from this source amounts to $5,580,960. (Appendix A-3)

A representative sample of student body spending was obtained by surveying all 10:00 a.m. classes (about 40 sections) and selected undergraduate and graduate evening classes (about 15 sections). This survey produced 480 valid responses from undergraduate students. Resident undergraduates were found to spend $1,979 each academic year, while nonresidents on average spend $4,102 in the Rome area. (Appendices B-3, B-4) With 941 resident students and 202 nonresident students, the total annual direct spending from this source amounts to $2,690,843.

TABLE 3

INITIAL ANNUAL IMPACT OF BERRY COLLEGE PURCHASES
(Fiscal 1985)

| (1) Item | (2) Amount* | (3) SIC Codes | (4) Payroll/Sales** | (2) x (4) Local Value Added |
|---|---|---|---|---|
| Trade Purchases | $1,295,999 | 5000 | .121 | $ 156,816 |
| Employee Benefits and Travel | 1,618,144 | 8930 | .394 | 637,549 |
| Taxes & Utilities | 1,333,138 | *** | .397 | 529,256 |
| Finance & Insurance | 156,427 | 7300 | .395 | 61,789 |
| Rental | 64,691 | *** | .219 | 14,167 |
| Repair Service | 283,446 | 7600 | .344 | 97,505 |
| Business Services | 246,000 | 7300 | .395 | 97,170 |
| Vehicle Repair, Service & Operation | 275,227 | 7500 | .238 | 65,504 |
| Other | 150,000 | 5300 | .149 | 22,350 |
| | $5,423,072 | | | $1,682,106 |

* Source: Vice President for Finance.

** Percent of local purchases that stays in the county. Calculated from data presented in:

Census of Service Industries, U.S. Dept. of Commerce 1982, GA Table 6, P. 41.
Census of Wholesale Trade, U.S. Dept. of Commerce 1982, GA Table 8, p. 38.
Census of Retail Trade, U.S. Dept. of Commerce 1977, GA Table 5, p. 33.

*** J. Wilson, "Economic Impact of a University on the Local Economy, Dissertation, Kent State University, pp. 148, 153.

Although the spending by Berry's 264 graduate students is considerable, the study omits their spending from this total since most reside in Rome and would simply "do without" the master's degree rather than move to a distant university town solely for this purpose.

The final source of the College's initial impact is visitor spending. Again, the Research Office, together with the museum staff, conducted a survey to determine what percentage of visitors were drawn to Rome specifically to visit the College, Oak Hill, Possum Trot or the Martha Berry Museum, how many come each year, and, finally, how much visitors contribute to Rome area income. (Appendix C)

Sightseers, including school groups, retired persons and garden clubs total about 18,000 each year. Two thirds of these are from Georgia and the remainder have traveled here from out of state. Additionally, campus guests number almost 20,000.

The survey results indicate that one half of the museum and Oak Hill visitors have traveled to Rome specifically to see these attractions. Other visitors are in the area on business or enroute to different destinations. About one third of those in Rome specifically to visit Berry remain overnight. The initial spending impact for lodging, meals and gasoline of those sightseers coming specifically to visit the Martha Berry Museum and Oak Hill total $241,000. Add to this gasoline and minimal off-campus meals for Berry College campus guests, the figure reaches at least $641,000.

The total direct spending by all of these College-related sources amounts to $14,335,875.

The local multiplier was then calculated. Table 4 shows the calculation which uses the local purchase impact figure, the gross payroll figure and the results of the spending surveys. The calculated multiplier value for Berry spending in the Rome trade area is 1.66.

This means that every dollar initially spent generates an additional sixty-six cents of local spending.

The final spending impact figure, then, is the total of the initial spending sources -- College purchases, faculty/staff, student, and visitor spending -- $14,335,875 increased by the 1.66 multiplier. This final income figure for the Rome trade area totals $23,797,552.

There remains the computation of employee equivalents of student and visitor spending to gain a view of the number of jobs Berry College provides the community in addition to direct College employment. Appendix D shows the amount of purchases in each spending category needed to create one job in this employment sector in Floyd County. Appendix E shows the total spending in each category by students and visitors. The total spending in each category divided by the dollar amount needed to create one job yields the total number of local jobs created, or the employee equivalent of student and visitor spending. College-related spending generates eighty-nine local jobs in addition to the 333 full-time Berry payroll. Using the multiplier value of 1.66, Berry in total provides 701 jobs in the Rome trade area.

TABLE 4

COMPUTATION OF THE DIFFERENTIAL EXPENDITURE MULTIPLIER
USING LOCAL VALUE-ADDED*

---

$$M = 1 + \frac{r}{1 - s}$$ , where r = initial spending

s = re-spending ratio

---

A. Computation of r, the proportion of Berry College spending that is spent in the Rome area:

| | | |
|---|---|---|
| 1. | Local consumption by faculty/staff (survey) | $ 5,580,960. |
| 2. | Gross payroll to faculty/staff | 6,448,375. |
| 3. | Portion of payroll spent locally | (1) ÷ (2) = .865. |
| 4. | Value-added by College's local purchases | 1,682,106. |
| 5. | Initial local income generated by purchases | (3) x (4) = 1,455,022. |
| 6. | Total initial local spending | (1) + (5) = 7,035,982. |
| 7. | Total College spending (purchases + payroll) | 11,871,447. |
| 8. | Ratio of local spending to total spending | (6) ÷ (7) = .593. |

B. Computation of s, additional local spending induced by intial local spending:

| | | |
|---|---|---|
| 9. | Local value added by total local spending | (6) x (.121)** = $ 851,354. |
| 10. | Induced local spending | (9) x (3) = 736,421. |
| 11. | Ratio of induced local spending to initial local spending | (10) ÷ (6) = .101. |

C. Computation of multiplier:

12. 1.000 - (11) = .900
13. (8) ÷ (12) = .659
14. 1.000 + (13) = 1.659

* Salley, C.D., "Calculating the Economic Multiplier for Local University Spending," Research and Planning for Higher Education, p. 52.

** Trade purchases value-added, Floyd County from Table 3.

## VI. SUMMARY AND CONCLUSION

Since the 1970's, economic impact studies have become a productive vehicle to promote the positive attributes of nonprofit institutions for their local communities. Colleges and universities have made especially good use of such studies.

Succeeding impact studies resolved conceptual problems dealing with the manner in which college-related spending enters the local income streams and with accurate estimation of the extent that faculty, staff, students and visitors spend locally.

Developing accurate methods to estimate these channels of direct college-related spending did not complete the picture, however. Because of the interdependence of a high-consumption mass-production economy, every dollar of final product purchase sets in motion a flow of income to the chain of activity providing that purchase. The college's total local impact is thus some multiple of its initial direct spending.

Most impact studies approached the difficulties of multiplier estimation from the concept of the export base. The base sector's initial income is drawn from outside the community and this income induces several rounds of additional spending locally. The Berry College economic impact study uses a differential value-added technique to measure the amount of induced spending. As the name indicates, two different multipliers come into play -- an initial local spending ratio unique to Berry, and a second local spending ratio for subsequent rounds of local spending unique to the Rome trade area. This type of multiplier is used in the present study as it avoids both the oversimplified structure of aggregate

location quotient models and the massive data requirements of a fully disaggregated input-output model.

The calculated multiplier value for Berry College in the Rome trade area is 1.66. This means that every dollar the College draws into the area induces an additional sixty-six cents income for area residents.

Figure 1 shows that College-related spending for 1985 amounted to $14,335,875. This is a conservative figure which omits spending by part-time faculty and by graduate students. Using the 1.66 multiplier produces a reliable (in the sense of minimum) estimate of total income impact of $23,797,552.

In terms of jobs, the College directly provides 333 full-time positions and spending by students and visitors generates an additional 89. This makes Berry the trade area's sixth largest private employer. Using the multiplier estimate, Berry College provides the Rome community with a total of 701 full-time jobs.

Impressive as these immediate impact figures are, the College's greatest economic impact is the increased earning potential of Berry graduates and the attraction Berry has to new industry.

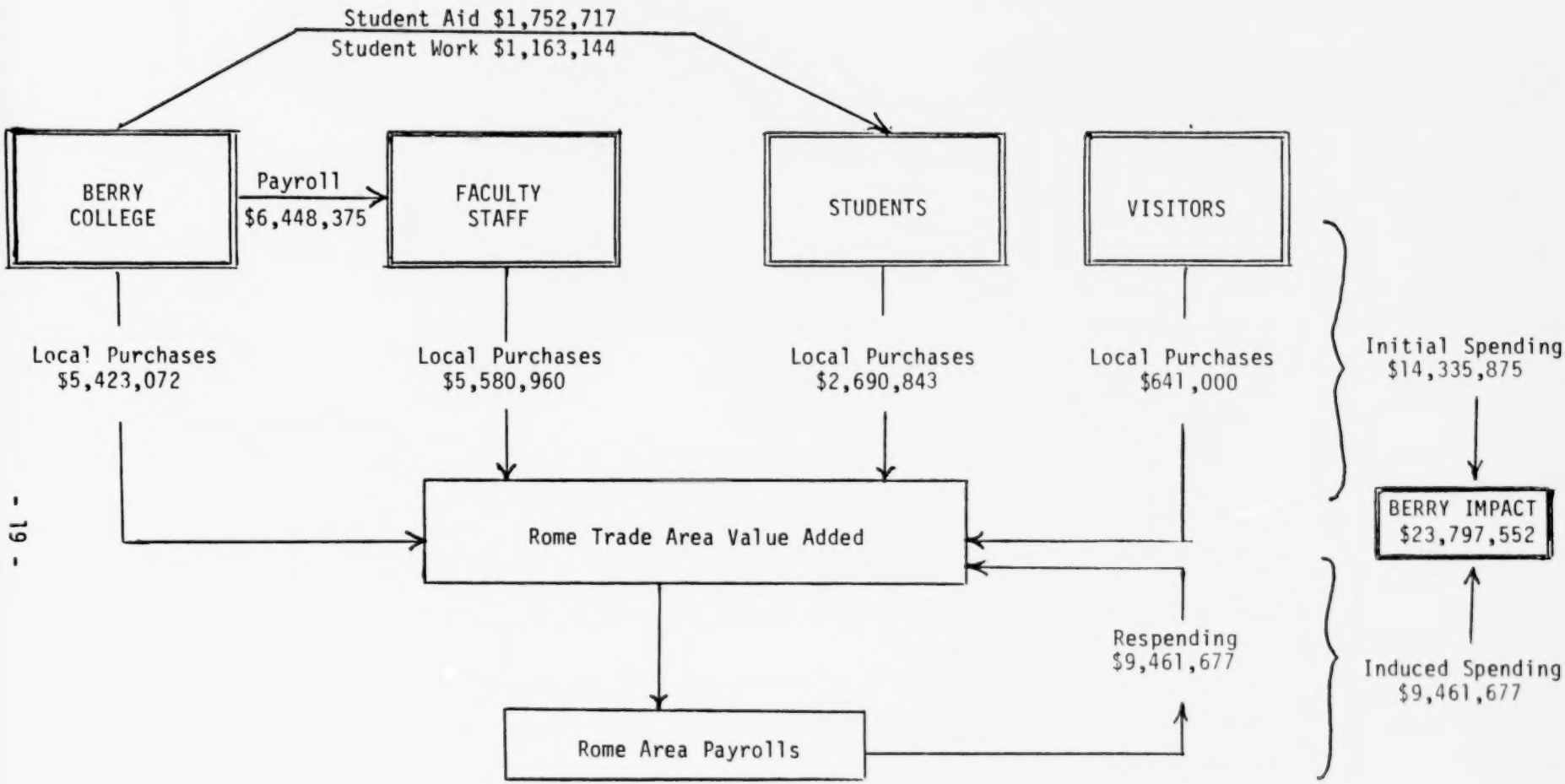
Student Aid $1,752,717
Student Work $1,163,144
BERRY COLLEGE
Payroll
$6,448,375
FACULTY STAFF
STUDENTS
VISITORS
Local Purchases
$5,423,072
Local Purchases
$5,580,960
Local Purchases
$2,690,843
Local Purchases
$641,000
Initial Spending
$14,335,875
BERRY IMPACT
$23,797,552
Rome Trade Area Value Added
Respending
$9,461,677
Induced Spending
$9,461,677
Rome Area Payrolls

FIGURE 1

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## APPENDICES


A-1 Faculty/Staff Survey Cover Letter

A-2 Faculty/Staff Survey Instrument

A-3 Estimation of Rome Area Annual Faculty/Staff Spending

B-1 Student Survey Cover Letter

B-2 Student Survey Instrument

B-3 Estimation of Rome Area Spending by Resident Undergraduate Students

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F Suggestions for Timely Updates

*campus communication* | BERRY COLLEGE
MOUNT BERRY • GEORGIA 30149

23 September 1985

TO:

FROM: Joe Walton
Vice President for Finance

SUBJECT: Berry College Economic Impact Study

With the encouragement of President Shatto, the Development Office is conducting an economic impact study for Berry College. The impact study will give interested members of the Rome community a picture of the contribution that Berry College makes to the local economy in the way of jobs and income.

One source of the college's impact on local employment is the spending patterns of the faculty, staff and students. Would you please help us to identify these patterns by completing the attached survey? Personal anonymity will be maintained. We have no interest in identifying the spending habits of individuals.

Consultation with other household members might be helpful in estimating some of the values requested. Even a rough approximation will be helpful in the overall estimation of these impacts.

If you have any questions about the completion of the survey form, please contact Dudley Salley at extension 2408.

Please return the surveys through campus mail to P.O. Box 206, by Monday, September 30, 1985.

Thank you for your cooperation!

APPENDIX A-2

BERRY COLLEGE
ECONOMIC IMPACT SURVEY

Your response will help to establish the importance of Berry faculty and staff spending on local jobs and income.

I. My position: Full-time staff_____ Full-time faculty_____

Part-time staff_____ Part-time faculty_____

II. My AVERAGE MONTHLY spending in Floyd, Polk, Bartow, Chattanooga, Gordon, or Cherokee (AL) County: (Atlanta doesn't count!)

| | |
|---|---|
| Rent or Mortgage | $_____ |
| Utilities (water, lights, gas, phone) | _____ |
| Groceries & Household Items | _____ |
| Automobile (payment, gas, repair, insurance) | _____ |
| Clothing Purchases | _____ |
| Personal Services (dry-cleaning, hair & child care) | _____ |
| Health Services (including insurance) | _____ |
| Furniture & Appliances | _____ |
| Eating Out (restaurants & burger places) | _____ |
| Entertainment | _____ |
| Other | _____ |

Please refold, staple and drop off, survey only, in campus mail to P.O. Box 206, by Monday, September 30, 1985.

Thank you for your help.

APPENDIX A-3

ESTIMATION OF ROME AREA ANNUAL FACULTY/STAFF SPENDING

Fall 1985

| | N | Full-Time Faculty | Full-Time Staff | Part-Time Staff |
|---|---|---|---|---|
| Population | 352 (100%) | 98 (28%) | 235 (67%) | 19 (5%) |
| Sample | 147 (100%) | 47 (32%) | 88 (60%) | 12 (8%) |

| Spending Category | Sample Monthly Average | Sample Annual Average | Weighted Annual Average* |
|---|---|---|---|
| Housing | $ 236 | $ 2,843 | $ 3,075 |
| Utilities | 150 | 1,802 | 1,799 |
| Food & Household | 245 | 2,950 | 2,993 |
| Automobile | 319 | 3,829 | 3,311 |
| Clothing Purchases | 102 | 1,232 | 875 |
| Personal Services | 46 | 560 | 544 |
| Health Services | 90 | 1,089 | 838 |
| Furniture & Appliances | 41 | 498 | 369 |
| Eating Out | 70 | 849 | 809 |
| Entertainment | 32 | 385 | 422 |
| Other | 57 | 693 | 820 |
| **TOTALS** | $ 1,394 | $16,729 | $ 15,855 |

* Weighting factors are the percent of total population in each category, i.e. 28% for faculty, 67% for full-time staff, and 5% for part-time staff. The weighting gives us the figure obtained if everyone had responded to the questionnaire.

Figures shown to nearest whole dollar.

campus communication | BERRY COLLEGE
MOUNT BERRY • GEORGIA 30149

4 October 1985

TO:

FROM: Doyle Mathis
Vice President and Dean of the College

SUBJECT: Berry College Economic Impact Study

As you know from your participation in the recent survey of faculty/staff spending, our Development Office is conducting an economic impact study. This study seeks to encourage local financial support for Berry by demonstrating the college's consequent job and income contribution to the Rome area.

The spending patterns of our students play a significant role. Would you help us identify their spending patterns by allotting about ten minutes of your class time toward the completion of student questionnaires?

One day during the week of October 7-11, please ask students in your 10:00 a.m. class to complete the enclosed survey forms.

If you have any questions about the completion of the survey, contact Dudley Salley at extension 2408.

Please return the completed surveys together in this same envelope through the campus mail to the Research Office, P.O. Box 206.

Thank you for your further help with the project.

APPENDIX B-2

BERRY COLLEGE
ECONOMIC IMPACT STUDY

Your response will help inform the Rome area how important our spending is for local jobs and income.

I. I am a Freshman_____ Junior_____ Graduate_____

Sophomore____ Senior_____

II. I live On Campus_____

Off Campus____

III. Each Quarter I spend $_____ on Tuition

$_____ on Books

IV. Each MONTH I spend in the Rome area (Atlanta doesn't count!):

| | |
|---|---|
| Housing | $_____ |
| Utilities (lights, phone) | _____ |
| Groceries & Household Items | _____ |
| Eating Out (restaurants & burgers) | _____ |
| Entertainment (movies, concerts) | _____ |
| Automobile (payment, gas, insurance) | _____ |
| Clothing Purchases | _____ |
| Personal Services (dry-cleaning, hair care, etc.) | _____ |
| Health Services | _____ |
| Furniture & Applicances | _____ |
| Other | _____ |

APPENDIX B-3

BERRY COLLEGE

ESTIMATION OF ROME AREA SPENDING
BY RESIDENT UNDERGRADUATE STUDENTS

Fall 1985

| | N | Freshmen | Sophomore | Junior | Senior |
|---|---|---|---|---|---|
| Resident Population | 941 (100%) | 295 (31%) | 307 (33%) | 179 (19%) | 160 (17%) |
| Sample | 322 (100%) | 91 (28%) | 99 (31%) | 67 (21%) | 65 (20%) |

| Spending Category | Sample Monthly Average | Sample 9 Month Average | Weighted Population 9 Month Average* |
|---|---|---|---|
| Books | $ 34 | $ 308 | $ 305 |
| Utilities (phone) | 7 | 66 | 63 |
| Food & Household | 47 | 423 | 417 |
| Automobile | 39 | 352 | 348 |
| Clothing Purchases | 24 | 216 | 215 |
| Personal Services | 10 | 89 | 90 |
| Health Services | 4 | 38 | 36 |
| Furniture & Appliances | 2 | 22 | 24 |
| Eating Out | 36 | 328 | 318 |
| Entertainment | 18 | 163 | 163 |
| TOTALS | $221 | $2,005 | $1,979 |

* Weighting factors are the percent of total population in each category, i.e. 31% for freshmen, 33% for sophomores, etc. The weighting gives us the figure obtained if everyone had responded to the questionnaire.

Figures shown to nearest whole dollar.

APPENDIX B-4

BERRY COLLEGE

ESTIMATION OF ROME AREA SPENDING
BY NONRESIDENT UNDERGRADUATE STUDENTS

Fall 1985

| | N | Freshmen | Sophomore | Junior | Senior |
|---|---|---|---|---|---|
| Nonresident Population | 202 (100%) | 32 (16%) | 32 (16%) | 47 (24%) | 91 (45%) |
| Sample | 58 (100%) | 4 (16%) | 9 (16%) | 14 (24%) | 26 (45%) |

| Spending Category | Sample Monthly Average | Sample 9 Month Average | Population Average |
|---|---|---|---|
| Books | $ 41 | $ 372 | $ 372 |
| Housing | 65 | 584 | 584 |
| Utilities | 33 | 297 | 297 |
| Food & Household | 63 | 571 | 571 |
| Automobile | 108 | 968 | 968 |
| Clothing Purchases | 39 | 353 | 353 |
| Personal Services | 11 | 102 | 102 |
| Health Services | 13 | 120 | 120 |
| Furniture & Appliances | 5 | 47 | 47 |
| Eating Out | 56 | 501 | 501 |
| Entertainment | 21 | 187 | 187 |
| TOTALS | $455 | $4,102 | $4,102 |

Figures shown to nearest whole dollar.

APPENDIX C

BERRY COLLEGE
ECONOMIC IMPACT STUDY
VISITOR SURVEY

Welcome to Berry! We're glad you've come. While you're here, would you please take a moment to fill out this survey? We think that the results will help us show others how vital our visitors are to us and to our community.

Check Appropriate Answer

I. What brought you to Rome?

- Specifically to see Berry College _____
- Visiting friends or relatives at Berry _____
- Attending a conference or event at Berry _____
- Visiting friends or relatives in the Rome area _____
- Enroute elsewhere -- stopped in out of curiosity _____
- Other _____

II. How long will you be in the Rome area?

- One day or less _____
- Overnight _____
- More than two days _____

III. How many people are in your family or group? _____

Many thanks. Strengthening the life and growth of Berry College depends in part on support from our community. Your response will help us raise funds to continue improving our standards of excellence. We hope that your visit to Berry is enjoyable and that you'll plan to visit us again in the future.

APPENDIX D

LOCAL SALES/EMPLOYEE

| (1) Employment Sector | (2) SIC Code | (3) Sales* (1,000) | (4) Employees | (5) Sales/Employee |
|---|---|---|---|---|
| Books & Supplies | 594 | $ 5,489 | 141 | $38,930 |
| Utilities | | | | 26,542** |
| Food & Household | 540 | 57,216 | 605 | 94,570 |
| Automobile | 554 & 555 | 65,193 | 560 | 116,420 |
| Clothing Purchases | 560 | 13,725 | 371 | 36,990 |
| Personal Services | 720 | 7,898 | 346 | 22,830 |
| Health Services | 591 | 7,964 | 170 | 46,850 |
| Furniture & Appliances | 570 | 12,791 | 437 | 29,270 |
| Eating Out | 581 | 17,835 | 953 | 18,710 |
| Entertainment | 780 & 790 | 2,852 | 151 | 18,890 |
| Housing | | | | 96,427** |
| All Services | 700 & 800 | 88,563 | 2,776 | 31,903 |

* Census of Wholesale, Retail and Service Industries, U.S. Dept. of Commerce, 1982, GA, pp. 38, 33, 41.

** J. Wilson, "Economic Impact of a University on the Local Economy," Dissertation, Kent State University, pp. 148, 153.

APPENDIX E

EMPLOYEE EQUIVALENT OF STUDENT SPENDING

| (1) Student Spending Category | (2) (9 mos.) Annual Amount of Local Purchases | (3) Local Sales/Employee | (4) (2) - (3) Employee Equivalent |
|---|---|---|---|
| Books & Supplies | $362,149 | $38,930 | 9 |
| Utilities | 119,277 | 26,542 | 4 |
| Food & Household | 507,739 | 94,570 | 5 |
| Automobile | 522,802 | 116,420 | 5 |
| Clothing Purchases | 273,621 | 36,990 | 7 |
| Personal Services | 105,294 | 22,830 | 5 |
| Health Services | 58,116 | 46,850 | 1 |
| Furniture & Appliances | 32,078 | 29,270 | 1 |
| Eating Out | 400,440 | 18,710 | 21 |
| Entertainment | 191,157 | 18,890 | 10 |
| Housing | 117,968 | 96,427 | 1 |
| | | Student Spending Equivalent | 69 |

EMPLOYEE EQUIVALENT OF VISITOR SPENDING

| (1) | (2) | (3) | (4) |
|---|---|---|---|
| All Services | $641,000 | $31,903 | 20 |
| | | Total Employee Equivalent | 89 |

APPENDIX F

SUGGESTIONS FOR TIMELY UPDATES

## I. Need for Timely Updates

Because the economic impact study broadcasts positive contributions of Berry College, the study results should be used continuously in the school's publications. Consequently, the dollar amounts and employment counts generated by Berry's instructional and auxiliary operations should be up-to-date.

Annual recalculation of the full study is not practical in view of the great demands on resources and personnel to conduct spending surveys. Happily, such calculation is not a frequent necessity since basic spending patterns and the commercial structure of Floyd County are not likely to change significantly from one year to the next.

## II. The Annual Update

A simple, yet accurate, annual update may be conducted as follows:

A. Obtain current enrollment and faculty/staff data from the registrar and personnel office.

B. Obtain current payroll and expenditure data from the business office.

C. Obtain the price level change since the initial study from the Federal Reserve Bulletin. Price indices for the U.S. are listed in the appendix of each monthly issue.

D. Calculate initial spending in Floyd County using existing spending survey results and updated student and faculty/staff headcounts. Multiply this total spending for students and for faculty/staff by the price change index (example: $1,000,000 X 1.03 = $1,030,000). Multiply business office expenditures by the price change index. Sum these to obtain a price-adjusted initial spending total for the current year.

E. Multiply this figure by the 1.66 multiplier to obtain the total level of initial plus induced spending in Floyd County.

F. Use this updated figure in current publications.

## III. The Third-Year Update

The 1.66 multiplier, unique to Berry expenditures in Floyd County, will remain valid until there are major shifts in wholesale, retail, and service establishments in the county or major personal expenditure changes, i.e. an auto assembly plant locates in the county or mail-order groceries are available from out-of-county!

Such changes in business establishings can be detected upon release of the 1987 census data, probably in 1988. (The present study has used the latest available data which is 1982.) The new sales-local-payroll percentages, if significantly different from those used in the original study, can be used in the third-year update. This entails a recalculation of the local value-added figures for college purchases and the employee equivalents of student spending. All other calculations are as in (II) above, except that the multiplier is also recalculated.

## IV. The Five-Year Update

Full recalculation of spending surveys may wait until five years after publication of the original study. At that time, all surverys are repeated, current headcount and budget data are used, and the 1992 or most recent local payroll-sales figures are used. This is a complete update.

Charles D. Salley
January 15, 1986